

A METHOD AND SYSTEM FOR WRITE CLOCK SYNCHRONIZATION IN  
A DATA STORAGE SYSTEM

ABSTRACT OF THE DISCLOSURE

5           A method for synchronizing newly recorded data with previously  
recorded data. The method is implemented within a disk-based data storage  
system. A first difference between a wobble reference signal and previously  
recorded data is measured. Test data is written on a test track to measure a  
second difference between the wobble reference signal and the test data. The  
10   test data is written synchronously with a write clock. An offset value is  
determined by comparing the first difference and the second difference. New  
data is then written using the write clock and the offset value such that the  
new data is synchronized with the old data. To determine the offset value, the  
test data can be written to the test track with a write clock calibration delay  
15   set to zero, the test data can then be read from the test track and the first  
difference can be subtracted from the second difference to determine the offset  
value for the write clock calibration delay. A delay offset can be inserted into a  
wobble-to-laser path to cause the new data to have the same epoch as the  
previously recorded data. An error value can be checked to determine whether  
20   the error value is within predetermined limits, wherein the error value is the  
difference between the first difference and the second difference. The write  
clock can be adjusted in accordance with the error value if the error value is  
outside the predetermined limits.